

REMARKS

Claims 1-52 were pending; of these, claims 5-14, 29 and 31-43 are withdrawn from consideration as being drawn to a non-elected species. Claims 1-4, 15-18, 20-23, 28 and 44-52 are rejected, while claims 19, 24-27 and 30 are objected to as being dependent upon a rejected base claim (but are indicated as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims). By the above amendments, the applicants have amended claims 18 and 50 and added new claims 53-58. Therefore, claims 1-4, 15-28, 30 and 44-58 are now under consideration. The applicants request further consideration and re-examination in view of the amendments above and remarks set forth below.

Information Disclosure Statement:

In the office action mailed on May 28, 2004, the Information Disclosure Statement (IDS) submitted on Nov. 8, 2000, was indicated as failing to comply with 37 CFR 1.98(a)(2) because a copy of reference AG by Malluhi, et al. was not supplied with the statement. With the applicants' response filed on October 28, 2004, the applicants submitted a supplemental IDS, together with a copy of the Malluhi, et al. reference and the fee under 37 CFR 1.17(p). The office action mailed on May 2, 2005, acknowledges the applicants' response to the IDS objection. However, the office action did not appear to include a copy with the examiner's initials showing that the Malluhi, et al. reference was considered. In the applicants' response filed July 1, 2005, the applicants requested that the Malluhi, et al. reference be considered and that the examiner's consideration of the Malluhi, et al. reference be made of record in the application file. In the office action mailed on August 8, 2005, the examiner requested that the applicant's submit a form PTO-1449 with respect to Malluhi, et al. for signature. The applicant's supplied a copy of form PTO/SB/08B (substitute for form PTO-1449) with the response filed Oct. 28, 2004. Per the examiner's request, the applicants submit herewith another copy of form PTO/SB/08.

In addition, with the applicants' response filed July 1, 2005, the applicants' submitted another IDS, together with form PTO/SB/08B listing U.S. Provisional Patent Application 60/206,580 to Nemovicher. This Nemovicher provisional application was discussed in the applicants' remarks filed July 1, 2005, regarding claim rejections. In the office action mailed August 8, 2005, the rejections were indicated as overcome, which the applicants gratefully acknowledge. However, the

office action does not appear to include a copy of the form PTO/SB/08B with respect to the Nemovicher provisional application with the examiner's initials showing that the Nemovicher provisional application was considered.

The applicants respectfully request that the examiner's consideration the Mallihi, et al. reference and the Nemovicher provisional application be made of record in the application file.

Rejections under 35 U.S.C. § 112:

Claims 18 and 50 are rejected under 35 U.S.C. § 112 on the grounds that the phrase "that is not controlled" is a "negative limitation." The applicants have amended claims 18 and 50 to no longer recite the phrase "is not controlled."

Rejections under 35 U.S.C. § 103:

Claims 1-4, 15-18, 21, 23, 28, 29, and 31-52 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bell et al. (US 2002/0049778) in view of Baughman (US 6,408,399). Particularly, regarding claims 1, 15, 44, 45, 48, 49 and 51-52, the examiner stated that Bell is silent on reciprocal backup, but that Baughman "utilizes the reciprocal back up among computer nodes in order balancing load distribution (Baughman, Fig. 3, col. 2, lines 32-39)." The examiner further stated that "it would have been obvious to incorporate the teaching of reciprocal backup with service level agreement as taught in Bell to have a system that is capable of providing data from a plurality of storages, which appeared as a single storage, which would enhance data storage capability, while maintaining redundancy and capable of restoring data services to its clients, expeditiously."

The applicants respectfully traverse the rejection. The applicants' claim 1 is as follows:

1. A method for backing up data on a plurality of computers connected via a network, comprising:

forming one or more partnerships among the plurality of computers such that each computer in a partnership commits under an agreement to store backup data received from one or more of its backup partners, whereby a first computer in each partnership assumes the task of storing backup data received from one or more other computers in the partnership and one or more of the other computers in the partnership assume the task of storing backup data received from the first computer;

backing up data in accordance with each agreement; and

periodically verifying that previously backed up data is being retained by the computers committed to act as backup partners in accordance with each agreement.

Thus, claim 1 requires the formation of reciprocal partnerships in which a plurality of computers cooperate to store each other's backup data and in which the commitments are periodically verified.

Bell teaches an information outsourcing system in which enterprise sites transfer and store data at remotely located storage sites without reciprocity. See, Bell, Abstract and para. 11. While Bell discusses service level agreements at para. 14, these simply specify the level of service that a storage service provider is to provide to the enterprise sites.

Baughman discloses a system in which multiple computers operate substantially in parallel, with one computer in an active state and at least one computer in a standby state. Baughman at col. 3, lines 24-27. The standby computer acts as a backup for the active computer, ready to assume the active state in the event of a problem with the active computer. Baughman at col. 1, lines 7-8 and 29-35. As shown in Figure 3 of Baughman, a system manager 120 and 130 for each of two computers 10 and 11 ensures that there is one computer in the active state at all times and invokes a transition of the other to an active state if necessary. Baughman at col. 5, lines 10-14. The computers 10 and 11 are connected to external storage devices 12 and 13. Baughman at col. 4, lines 1-2. The active computer writes or modifies the data at the storage devices 12 and 13, while a disk manager replicates the data to both storage devices 12 and 13. Baughman at col. 4, lines 58-61. Thus, the storage devices act as a single logical disk. Baughman at col. 2, lines 36-39. Because the computers 10 and 11 both access the storage devices 12 and 13 directly, they share the same data.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Manual of Patent Examining Procedure (MPEP), Section 2143 (8<sup>th</sup> Ed. May 2004). Moreover, the teaching or suggestion to make the claimed combination and the reasonable

expectation of success must both be found in the prior art, not in applicant's disclosure. MPEP, Section 2143, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Addressing the final requirement first, the applicants submit that the Bell and Baughman references do not teach or suggest all of the limitations of the applicants' claim 1, even if considered in combination. As explained above, claim 1 recites that "a first computer in each partnership assumes the task of storing backup data received from one or more other computers in the partnership and one or more of the other computers in the partnership assume the task of storing backup data received from the first computer...". Therefore, claim 1 requires a reciprocal partnership in which each computer in the partnership stores data of the other. The examiner agrees that Bell does not disclose such a feature. It is clear that Baughman also does not disclose that each computer in a partnership stores data of the other because the computers of Baughman both access the storage devices directly and share the same data.

For at least this reason, claim 1 is allowable over Bell and Baughman. Similarly to claim 1, independent claims 45, 48 and 49 each require that a first computer in each partnership assumes the task of storing backup data received from one or more other computers in the partnership and one or more of the other computers in the partnership assume the task of storing backup data received from the first computer. As explained above, Bell and Baughman, taken singly or in combination, do not suggest or disclose such a feature. Accordingly, claims 45, 48 and 49 are allowable over Bell and Baughman. Claims 2-4, 15-18, 21, 23, 28, 29, and 31-44, 46, 47 and 50-52 are allowable at least because each depends from an allowable base claim.

Further, claim 49 recites exchanging messages among computers of the plurality to determine the ability of each to satisfy backup storage requirements of one or more others. The applicants submit that neither Bell, nor Baughman disclose such a feature, nor has the examiner indicated that they do. This is another reason why claim 49 is allowable. This is also another reason why claims 50 and 51 are allowable, being dependent from claim 49.

Moreover, in the office action dated August 8, 2005, several of the dependent claims are rejected on grounds of inherency. See, for example, the rejection of claims 16-17, 28 and 47. Several other dependent claims are rejected without any indication as to where in the cited references their features are allegedly disclosed. Thus, it

appears that the examiner also relies on inherency in rejecting these claims. See, for example, the rejection of claims 2, 18, 20, 22, 46 and 50. However, these inherency arguments depend upon the rationale that the Bell and Baughman references teach reciprocal backup, which they do not. Accordingly, the applicants submit that these dependent claims are not properly rejected.

Further, the applicants submit that there would not be a motivation to combine the Bell and Baughman references in the manner suggested by the examiner. This is at least because Bell is directed to an information outsourcing system in which enterprise sites transfer and store data at remotely located storage sites, while Baughman is directed to a system in which standby and backup computer systems have access to the same data. Thus, neither reference suggests a combination with the other. While the Bell and Baughman references both discuss data storage, they are directed to entirely different problems encountered within this broad category of endeavors. Accordingly, there would be no motivation to combine them.

The examiner alleges that it would have been obvious to combine “the teaching of reciprocal backup” of Baughman with service level agreements as taught in Bell “to have a system that is capable of providing data from a plurality of storages, which appeared as a single storage, which would enhance data storage capability, while maintaining redundancy and capable of restoring data services to its clients, expeditiously.” As best understood by the applicants, however, the examiner simply alleges that the motivation for such a combination would be enhance data storage capability while maintaining redundancy. However, this does not explain how a person of ordinary skill in the art would be motivated to make the specific combination suggested by the examiner and to make the specific modifications of the references which would be required to meet all of the limitations of applicants’ claim 1.

For example, as explained above, the computers of Baughman each directly access the shared storage. Accordingly, there would be no need, and thus no motivation, for using the service level agreements of Bell between the computers of Baughman. Moreover, there is no teaching or suggestion in Bell of any reciprocity of data storage between the enterprise sites and the storage sites. Thus, while Bell discusses service level agreements at para. 14, these simply specify the level of service that a storage service provider is to provide to the enterprise sites; Bell does not teach or suggest that such service level agreements could cover reciprocal storage

in which computers in a backup partnership agree to back up each other's data, as in the present invention. Thus, there would not be a suggestion to modify the service level agreements of Bell for reciprocal storage.

Further, as explained above, the examiner agrees that Bell does not disclose that a computer in a partnership stores data of the other. It is clear that Baughman also does not disclose such a feature because the computers of Baughman share the same data. Therefore, there would not be motivation to combine the references to achieve such a feature, nor would there be a reasonable expectation that such a combination would succeed at achieving such a feature.

Because it would not have been obvious to combine the Bell and Baughman references, this is another reason why claims 1-4, 15-18, 21, 23, 28, 29, and 31-52 are allowable.

New Claims:

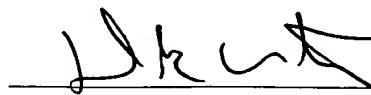
New claims 53 and 56 recite forming at least two partnerships among the plurality of computers. New claims 54 and 57 recite that at least one computer of the plurality assumes the task of storing backup data received from at least two other computers. New claims 55 and 58 recite that different portions of data of at least one computer of the plurality are stored by at least two other computers. New claims 53-55 are allowable at least because they depend from an allowable base claim 1. New claims 56-58 are allowable at least because they depend from an allowable base claim 49.

Conclusion:

In view of the above, the applicants submit that all of the claims under consideration are now allowable. Allowance at an early date would be greatly appreciated. Should any outstanding issues remain, the examiner is encouraged to contact the undersigned at (408) 293-9000 so that any such issues can be expeditiously resolved.

Respectfully Submitted,

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